

Abstract

An optical device is provided comprising a plurality of prisms, two dichroic surfaces having different wavelength characteristics from each other, and a prism surface that satisfies a total reflection requirement for a predetermined light component. Also provided is a projection display apparatus comprising a light source, light valves for respectively modulating components of the light from the light source, an optical device for chromatically synthesizing the modulated light components, and a projection section for projecting the modulated light. Optionally, the optical device may also be used in the projection display apparatus for separating the light from the light source into the multiple light components. Further provided is an image capturing apparatus comprising a taking lens unit for receiving light, an optical device for separating the light received by the taking lens unit into multiple light components, and imaging devices for respectively converting the multiple light components into image data.